



California Energy Commission

Staff Workshop

Carbon Capture and Geologic Storage

May 18, 2009 - 9:00 am

AGENDA

Workshop Technical Session

- 9:00 Energy Commission Welcome; Overview of the Integrated Energy Policy Report Workshop Goals; Update on Geologic Carbon Sequestration Technology Development and Demonstrations (including WESTCARB)
- Martha Krebs, Director, Public Interest Energy Research Program, and Deputy Director of R&D, California Energy Commission
- 9:30 Overview of Geologic Carbon Sequestration Strategies for California (AB 1925 Report to the Legislature)
- Elizabeth Burton, Earth Systems Science & Engineering Program, Lawrence Livermore National Laboratory
- 10:00 Overview of CCS Legal, Regulatory, and Institutional Issues, and Approaches Being Pursued Federally and by Other States
- Craig Hart, Counsel, Energy Infrastructure—Climate Change and Technology, Alston & Bird
- 10:15 Panel Discussion: Addressing CCS Legal, Regulatory, and Institutional Issues and Policy Opportunities in California
- Moderated by Craig Hart, Alston & Bird
- Oil Refiner's Perspective, Susann Nordrum, Carbon Capture & Sequestration Team Leader, Chevron Energy Technology

- Investor-Owned Electric Utility's Perspective, Mark Nelson, Director of Generation Planning & Strategy, Southern California Edison
- Unregulated Power/CO2 Capture Project Developer's Perspective, Tiffany Rau, Policy and Communications Manager, Hydrogen Energy International
- California Division of Oil, Gas, and Geothermal Resources Perspective, Michael Stettner, Underground Injection Control Manager, DOGGR, California Department of Conservation
- U.S. Environmental Protection Agency's Perspective, David Albright, Groundwater/Underground Injection Control, Water Office, EPA Region 9
- Environmental NGO's Perspective, George Peridas, Science Fellow, Climate Center, Natural Resources Defense Council

Noon Lunch (On your own)

1:15 Advances in CO2 Capture Technologies and California Opportunities

Dale Simbeck, Vice President of Technology, SFA Pacific

1:45 California's Low-Carbon Fuel Standard and Opportunities for CCS as a Contributor to Compliance

Geir Vollsaeter, Special Policy Advisor, Alston & Bird

2:15 AB 32 Update and Opportunities for Industrial Point Source CO2 Capture and Geologic Storage

Mary Jane Coombs, Office of Climate Change, California Air Resources Board

Policy Discussion and Public Comment Session

2:45 Open Discussion and Public Comments

Moderated by Kelly Birkinshaw, Advisor to Commissioner Boyd, California Energy Commission

3:30 Comments by Energy Commissioners and Dept. of Conservation, California Public Utilities Commission, and California Air Resources Board representatives

4:00 Meeting Adjourns

Policy Questions Framing the Workshop

Commercial-scale application of CCS at a level making a significant contribution to state GHG reductions will invariably involve subsurface CO₂ storage spanning multiple property parcels. State law is unclear regarding the applicability of mineral estate laws to pore space in fully depleted hydrocarbon reservoirs or in non-hydrocarbon-bearing saline formations. In addition, the injection of CO₂ for long-term subsurface storage generally creates an elevated pressure area of influence beyond the extent of the CO₂ plume boundary. Trespass laws with respect to this subsurface elevated-pressure zone are also unclear. Finally, long-term liability for properly injected CO₂ remains uncertain (the proposed US EPA Class VI Underground Injection Control rule for geologic sequestration wells, for example, does not cover this issue). Should California follow the example of other states and establish and/or clarify state law governing these situations?

Should the State of California (e.g., Dept. of Conservation) seek primacy from U.S. EPA in implementation of the Class VI UIC permitting for geologic CO₂ storage wells once U.S. EPA issues the final rule?

The 2007 Low-Carbon Fuel Standard report (Part 2, Policy Analysis) recommends that CCS projects “directly related to the supply of transportation energy” should be included within the LCFS. Are the requisite “enabling” technical and policy measures in place to allow CCS to develop to the point it could be considered an option in the LCFS compliance portfolio?

The adoption of CCS by electric power plants serving California markets could have significant implications for the electricity supply and dispatch models used by the California Energy Commission, the Independent System Operator, and others. Are the necessary technology transfer and modeling activities in place in conjunction with the technology validation and regulatory outreach activities by the WESTCARB research partnership?

Depending on the pace of technology validation and resolution of legal and institutional issues, the adoption of CCS by California industrial facilities and out-of-state electric power plants serving California markets could make a significant contribution to AB 32 compliance. Are the necessary technology transfer and modeling activities in place between the WESTCARB research partnership and AB 32 rulemaking committees?